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AUTHOR Gall, Robert S.
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ABSTRACT

The paper provides a discussion of major issues and directions in special education from an international perspective. Noted first are such assumptions as the ultimate importance of the individual and such concerns as increased depersonalization and alienation. A brief review of historical commitments and accomplishments in special education during the last two decades is provided next, followed by a comparison of the American and Canadian interpretations of the international obligation to provide all children with an education. Eight dominant trends are then examined: (1) the non-categorical movement and associated pedagogical strategies; (2) expanded age range for special education; (3) expanded services to broader ranges of exceptionality; (4) the positive impact of technology; (5) the expansion of community based paraprofessional supports in special education; (6) the principle of normalization as the philosophical base for services; (7) the emergence of alternative training models for both professionals and paraprofessionals; and (8) the emergence of the parent as professional. The trends serve as the basis for identification of six support components or service principles for policy development including equity/equitability, comprehensiveness, flexibility, accountability, cost effectiveness and compatibility, and simplicity. The conclusion stresses the need for the education sector to accept significant changes to the status quo. (DB)

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Framework for Policy and Action in Special Education: An International Perspective

Robert S. Gall

Professor of Education, University of Lethbridge and
Consultant, Government of Alberta, Department of Education Response Center

EC192111

FRAMEWORK FOR POLICY AND ACTION IN SPECIAL EDUCATION:
AN INTERNATIONAL PERSPECTIVE

R. S. GALL, PH.D.

Council for Exceptional Children
Symposium on the Future of Special Education

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1. Preface: Assumptions and Principles

A series of assumptions are woven into the content of this paper and are now presented because they do not elicit universal agreement:

- That the individual is the most important entity in our societies.
- That qualitative education is a right of all developing citizens in our countries; and that denying these rights to any minority is to risk denying it to all.
- That all countries express this commitment to developing citizens by mandating the universal right to education, and supporting that legislation by appropriate regulatory safeguards.
- That children should be given maximum opportunity to learn and to develop their abilities to the fullest extent possible through processes of individualized instruction. This instruction should occur in an environment as "typical" for the society as can be attained, given that age-appropriate shared experiences are one of the primary vehicles of instruction.

- That parents have a right to full knowledge of, and maximum appropriate involvement in, the education of their children; indeed, that they must be reinforced in their role as primary "educators".
- That the educational system as we know it must undergo radical revisions in both attitude and methodology or risk collapse.

These assumptions operate within the most intricate and complex social system imaginable, however. Relationships between individuals, agencies, branches of government, external professional and para-professional interest groups, advocacy groups, parents and all segments of the educational community, all interact on local, national and international levels to either strengthen or diminish the realization of these principles in the future.

2. Introduction:
Special Needs Children And their Education

I lay down as a prime condition of sane society ... that in any decent country, children should find in every part of their native country, food, clothing, lodging, instruction, and parental kindness for the asking ... the children must have them as if by magic, with nothing to do but rub the lamp, like Aladdin, and have their needs satisfied.

George Bernard Shaw, Parents and Children (1914)

Special education services cannot be examined apart from the unique perspective which any nation's citizenry brings to its view of mankind and the value ascribed within that socio-psychological context to human uniqueness. Accordingly, the challenge issued by CEC to present philosophical and practical policy considerations for special education "without regard for national boundaries" is one that should appeal to either the most visionary or the most naive amongst us. This presentation should reveal that the author possesses at least one of these qualities.

Recently the author observed the embarrassment of an educational delegate from Africa, who on approaching the podium of an international congress wanting to say, "I speak to you tonight with a clear mind" instead uttered "I speak with an open head". The broad context of this symposium requires equal latitude of expression.

The author has examined directly the special education services, and the prevailing ethic behind them, in several countries. Extensive observations in Canada were made through lifelong citizenship, two decades of service in the academic community, and a decade of affiliation with the National Institute on Mental Retardation. Two advanced academic degrees were earned in the United States. These early contacts were expanded by considerable recent work on behalf of CEC in the area of microcomputer applications to special education. Finally, sabbatical investigations provided an opportunity to observe at first hand the provisions made for special needs population in England, France, Italy, and New Zealand.

The realities of this Conference are such that an American perspective will prevail; the presence of three Canadians will not insure a genuinely North American posture, let alone an international one. It is important for participants to realize

the multi-national response to special needs education, our relative impotence in dealing with major inequities experienced by special needs populations, and yet persevere in a genuine spirit of advocacy on behalf of all children in need.

To provide some perspective on this challenge, a Canadian publication (Macleans, February 3, 1986) outlined the horrendous consequences imposed on the lives of children in a world unable or unwilling to respond to their needs. Fully 21% of the world's children under age 15 (approximately 343 million) live impoverished lives characterized by malnutrition; UNICEF reports that 15 million children die annually from predominantly preventable diseases, leaving malnourished "survivors" characterized by stunted growth, reduced intelligence and diminished productivity. This disturbing information should serve to remind us of our larger human responsibility; both intellectual rigor and emotional commitment is required of symposium participants as they assist CEC to identify the global future of special needs populations.

What role do educators play in facilitating or restricting the life chances of such children? Public schools have evolved as society's official accrediting agency. Through the process of schooling children are exposed deliberately and systematically to units of knowledge (curriculum) and as well to attitudes and opportunities for future life roles. The orientation and organization of national schools dramatically expose the national character and its view of people individually and collectively. The general value systems of the dominant culture are reinforced and conveyed to succeeding generations and youth through the schooling process.

Thus, school access provides an individual with exposure to social mores as well as skills; accordingly those who do well in school are rewarded with greater work opportunities, wealth, power and esteem. What then is the lot of the individual who is denied that access, or provided access to low quality and inappropriate schooling? This paper shall attempt a brief analysis of the variant solutions found to the "issue" of special needs children and their education in a predominantly North American environment.

3. Concerns as We Complete the Decade

At the beginning of this decade the author was asked to review external pressures and impending trends in the social service climate (1). That analysis presented the following scenario for the 1980's:

- increased depersonalization, a corresponding sense of alienation, and the intra-personal/interpersonal stress they create (as one index alone, in the Province of Alberta during the ten-year period of 1968-78, the marriage rate rose only 4%, while the divorce rate jumped to 147%).
- increased national protectionism and a loss of international fraternity (revealed for example, by the infamous OPEC manipulations of oil prices) and the disastrous consequences upon individual nation states.
- increased insecurity, perhaps best illustrated by the apocalyptic events that cascaded into the lives of all involved in the Iran of 1980, or the Libya of 1986;
- increased professional protectionism and self-preservation, illustrated in Canadian medical circles by the "extra billing" controversy, and even more dramatically in the recent U. S. liability insurance crisis where litigation has caused astronomical insurance premium increases in all human services; (Several studies presently before the Canadian government suggest that many physicians regularly bill for services not rendered, overbill, and even carry out medically unnecessary treatments to obtain higher fees.)
- the emergence of the "tool professional", to coin a term, which refers to those individuals who have high technical skills but low moral/ethical standards and a cavalier disregard for the client-person as a whole;
- increased incidence of personal and other-directed abuse, suggested by the numerous figures which report the tragedies such as child abuse and neglect, or the high adolescent suicide rate (in Alberta suicide is the second leading cause of death among teenagers);
- the growing mood of pessimism, apathy and fatalism regarding the impact of all social service professionals in alleviating human suffering on a scale

commensurate with its presence. Numerous treatises have spoken to the issue of professional "burnout" which relates to this trend.

It would be possible to eliminate many of those points from consideration, perhaps even all, as well as to add others. However, evidence abounds that we are having extreme difficulty in coping both collectively and individually with service needs throughout North America. Pressures on social systems are emerging in the form of budgetary crises and staff shortages. Individuals of conscience among the professional ranks are increasingly confronted with their inadequacy in the face of mounting pressures and obsolete service models. Illich calls our era the "age of disabling professionals". Authorities such as Wolf Wolfensburger predict the imminent collapse of the present service structure, and urge conscientious individuals to prepare to open their homes directly to the disadvantaged. It is apparent that we are in crisis, perceived or real, and that this symposium must address that crisis directly.

Before proceeding in Don Quixote fashion to tackle the windmill of the future, it is considered important to briefly examine a few statements of commitment, and to review several historical and international developments which appear to have affected our present state of affairs.

4. A Brief Review of Important Historical Developments In North American Special Education

4.1 Historical Commitments and Accomplishments During the Past Two Decades

We have noted that tremendous and largely positive changes have taken place during the past eight decades in North American attitudes towards "exceptional" children. At least three general stages of reaction have occurred during the 20th century as we moved from persecution/neglect/mistreatment to pity/protection and most recently to growing acceptance of the handicapped person. Integration into the society of the school in the fullest sense possible (the "Least Restrictive Alternative") is now widely recognized as a basic tenet of the special education enterprise even though that ideal is frequently not met.

North Americans have been overwhelmed since the 1950's with academic and colloquial treatises which reflect growing interest in the activities of the special education enterprise. A steady outpouring of emotion, and an equally persistent presentation of objective academic evidence, has emerged to challenge many traditional special education practices. For example, as early as 1962, Johnson (2) suggested that adequate evidence to support the effectiveness of special classes for the "retarded" was difficult to obtain in spite of supportive structures such as low enrollments and teacher salary bonuses.

Enforced segregation of special class students from their age peers was seen to restrict capacity to model effective learning strategies from those children. Specialized and segregated curricula were increasingly viewed as inappropriate and even harmful because they focused on supposed common deficiencies of the child rather than instructional impact. Many critics suggested that mainstream education only could reduce the special educational ghettos which had developed. The ideal became the "least restrictive environment", one widely viewed as challenging both educators and students to their best effort.

Prominent and respected special educators who had earlier advocated for partial segregation and traditional service models began to review their postures. One of the most noteworthy, Dunn, published a milestone article which called for a moratorium on the placement of mildly handicapped students in segregated settings (3).

Such treatises implored the general education network to accept responsibility for serving a broadly-constituted student population (4). At the same time, special educators were

challenged to abandon non-objective and unvalidated teaching practices in favour of data-based empirical procedures. Special education was challenged to become a science based upon single subject (individualized) research-to-practice procedures in contrast to those based on assumptions of student homogeneity. We were assured we would be "continually surprised at what we can do if we are imaginative enough to find better methods and procedures" (5).

These appeals met with intense action on both research and practice frontiers. New methods and procedures were developed and disseminated. Even the most severely handicapped were shown to benefit from the application of teaching technologies. Refined methods to teach coping skills to children being integrated into regular education settings were developed (6). The earlier focus of special educational intervention - the isolated child - was now balanced with a concern for improving the total educational environment. Service models stressing system accountability led to the concept of "zero reject", the philosophical principle and driving force behind both legislative and academic thrusts to serve special needs children (7).

University and college educators sought to improve teacher and aide skill levels as these skills became the focal point for a revised educational process which would assist all children regardless of their degree of biological or acquired deficiencies (8). Improvement in the quality of service was stressed as the "science" of teaching emerged.

In general, the decades of the 1960's and 1970's were periods of rejection of the medical perspective that had so long dominated special education philosophy and practice. Schools sought to distance themselves from a paradigm which seemed to create social and intellectual cripples. Smith and Greenburg (1975) coined the phrase "six-hour retardate" to describe the child forced to appear defective in the school environment but functioning effectively elsewhere (9). "Special" education practices came to be chastised for restricting human potential.

While it was to be expected that such vigorous criticism would be rejected by those entrenched in the prevailing system, the special education environment seemed overdue for transition during the 1960's and many special educators responded (10).

Thus, the 1970's era was marked by a serious attempt to upgrade the quality and quantity of special education services. Illustrative of this trend was the review provided by Tucker (1980) on the American national situation for that period (11). However, Tucker also noted not only a rapid quantitative improvement in services provided by special education, but a significant and disproportionate re-assignment of minority

children in more vague and legally-evasive categories such as "learning disabilities". The "new" system had obvious procedural weaknesses in spite of the redirection of philosophy. We retained a persistent tendency to focus on diagnostic procedures which reified disability labels.

The interaction of professional power and social perception was graphically demonstrated in the 1973 AAMD revised definition of "mental retardation": As Blatt (1981) noted:

the most recent, little appreciated but astonishing revision of the American Association on Mental Deficiency definition of mental retardation . . . literally revolutionized the incidence, prevalence, and concept of mental retardation, all with the simple stroke of a . . . pen (12).

This action demonstrated both the inadequacy of the preceding practices, but as well the potency of those in authority once they are convinced of the need for action.

It is interesting to note that these changes occurred in the 1970's and early 1980's, periods of relatively liberal and humanitarian social conscience matched with corresponding economic stability. History may well show the late-1980's as a transition phase to a period which is ultra-conservative, pragmatic, and economically unstable. How will the special needs populations fair when the public mood is altered?

It would be premature to assume that a continued spirit of advocacy will prevail in a political and economic climate that promotes inter-personal rivalry and enables inconsiderate access to resources by privileged segments of society.

Perske (1977) referenced the potential environment facing the severely/profoundly handicapped (perhaps the group to most benefit in North America from the philosophical and technological revolution in special education):

If we are ever to engage communities in making a place for the severely and profoundly handicapped, we must possess every skill necessary to bring about their full educational potential, and we must carry out the measurement that is integral to proving their progress.

Unless we create and maintain only the highest standards for ourselves, for our institutions, and for those we train, unfulfilled expectations will over time

lead to a regrettable loss of faith in this educational enterprise and a lack of belief in the potential of these students. This will in turn lead to diminishing support from school and community, doubt about the practicality and hard-won legislation, and withdrawal of funding for programs (13).

To this observer, we stand to lose many of the humanitarian achievements gained thus far; a spirit of vigilance and renewed vigor is called for which exceeds the energy given by many advocates in the 1960's and 1970's.

4.2 International Obligations: American versus Canadian Interpretations

The decades of the 1960's/70's/80's have thus far provided major opportunities for the nations of the world to identify and activate service programs for citizens previously denied essential human rights, and much discussion occurred at the national and international levels. In 1959 the United Nations Declaration of the Rights of the Child upheld special treatment, education and care for the handicapped under the provisions of its Principle 5.24. This commitment was enhanced in 1971 (U.N. Declaration on the Rights of Mentally Retarded Persons) when seven major protections were verified guaranteeing the dignity of life of such individuals, and included the concept of education as a primary feature. The U.N. International Covenant on Economic, Social and Cultural Rights passed in May of 1976 committed all signatories to national action providing recognition of the universal right of children to an education, compulsory and free to all, for at least the primary level.

Americans can be proud of their formal response to these international obligations. Landmark legislation had been enacted, including Public Law 94-142, Title XIX, Section 504 (amendment to Vocational Rehabilitation Act), the Developmentally Disabled Assistance, and the Bill of Rights Act, to name but a few.

Canada, although a signatory to the same United Nations' commitments, proceeded without the benefit of either a national office of education, or requisite political will, to retain a posture of national neglect that persists today.

This author, in several publications, has addressed the Canadian problem with a view consistent to that advanced by Csapo (1980):

Canadian special education is best viewed as an intricate patchwork quilt of political accident, professional ambition, and pedagogical oversight loosely bound together with provincial permissive or mandatory red tape and federal neglect . . .

Special education in Canada has emerged according to the exigencies of provincial political, social and economic pressures . . . Vestiges of historical solutions do not provide equal opportunity to education . . . Regional disparities, the need for depolitization . . . and the lack of equal opportunities . . . beg for new solutions (14).

Translated into lack of action at the regional level, the services which many Canadian special needs children receive would shock Americans used to the rigid but persistent monitoring standards of PL 94-142. The Canadian reality of 1986 remains one wherein

In many districts the goals of special education are still shrouded in mystery, stated in purposefully vague, diffuse, and politically non-offensive terms to satisfy the imagination of every potential advisory group (15).

It should be known that an international investigative body appointed by the OECD to investigate the Canadian educational structure came to the same conclusions.

The OECD report CANADA; REVIEWS OF NATIONAL POLICIES FOR EDUCATION (tendered in 1976) illustrated many deficiencies and concluded that appropriate qualitative special education provision was tragically deficient. Evidence supported the complicity of school officials in extending this negative environment; policies of benign neglect were found to prevail. OECD examiners found Canadian bureaucrats at the front line of resistance to change, and they described our national status with these words:

Hardly an area in which lack of co-operation among the various levels of government, and between professionals and parents, produces such harmful results as in the case of the handicapped child . . . authorities should delay no longer in removing the obvious deficiencies in provision (16).

While some collective progress toward the provision of full and appropriate educational rights for special needs children can be observed in Canada, the sporadic and piecemeal nature of this evolution begs for logical explanation and is best interpreted politically and ethically. While the physical integration of special needs students into many facets of normal Canadian school life is becoming accepted, such achievements have been accomplished at a snail's pace, largely devoid of major socio-cultural commitment. Related issues such as early childhood education and teacher training are delegated to regional arenas for solution. Attitudinal barriers and administrative resistance continue to hinder the ideal of unrestricted equality of educational rights (17).

In a recent conversation with the author, Harry Dahl (Canadian Governor to the CEC Executive) revealed two recent Canadian phenomenon which bear observing and might well create the climate for change in Canada. In Dahl's own words:

The Canadian Charter of Rights (1982) Section 15 addresses the issue of rights and identifies that individuals with mental or physical disability are equal before and under the law and have the right to equal protection and equal benefit of the law without discrimination. To date we have not witnessed any major or substantive judgments that used Section 15 as the key basis for argument. Canadians generally are very aware that the Charter of Rights needs to be reckoned with as programs and policies continue to evolve. What impact Section 15 will have in a direct way remains to be seen.

The second area has to do with the generic issue of bilingual education. It appears that this issue cuts across the Western world as demographic shifts become particularly pronounced. In Canada the support for and growth of French immersion programs will generate much greater demands for accommodating child variance ...

Thus, there is some evidence that the legitimate grievances of Canadian special children and their parents may be addressed in the near future, although precedence would suggest this process will be protracted.

This brief analysis of the Canadian special education environment is presented so that American readers realize that the philosophy and implementation strategies presented in PL94 - 142 are not universally shared. They are often even misunderstood in other parts of the continent. Americans are to be admired for the persistence demonstrated in implementing procedures which

guarantee even the most severely handicapped legitimate access to an educational system, and which seeks the full integration of special students with their age peers.

Americans appear to have broadened the concept of education beyond the "three R's" in an attempt to serve all children, and now seem imbedded in solving the partial problems in a spirit of moral commitment:

In light of the professional consensus and the various legal and programmatic arguments supporting it, the appropriate question is not, "Should we do it?" or "Does it work?", but rather "How can we make it work?" (18).

It is heartening to note that the 8th Annual Report to Congress on the implementation of PL94-142 (released May, 1986) continues to press for the attainment of four priority areas of service:

1. to assure that all handicapped children have available to them a free appropriate public education,
2. to assure that the rights of handicapped children and their parents are protected,
3. to assist the States and localities to provide for the education of all handicapped children, and
4. to assess and assure the effectiveness of efforts to educate handicapped children (19).

In the face of this American commitment to action, Canadians can reflect on the following interpretation:

Perhaps the most noteworthy disparities between the U.S. and Canadian cultures are the two governments' basic commitments: to life, liberty and the pursuit of happiness in the United States; and peace, order and good government in Canada (20).

What the author hopes to arouse by disclosing this position is simple awareness of the impact of collective will, which in a nation is formally expressed through the passage of legislation and appropriate supportive regulations. It is negligent for any nation to permit a disjointed educational posture driven primarily by the political machines of that nation to continue. As the authors of the OECD Report suggested:

Clearly, some basic elements of national responsibility arise because ... in all modern states:

- education is a right of each citizen, due to each citizen ...;
- the standards maintained by schools, community colleges, and universities are of national interest, because a large part of scientific-technical achievement and hence economic and social well-being may depend on them;
- unity of the educational system is a national interest, in order to maintain and guard the freedom of choice (via mobility) of citizens;
- the educational philosophy of an educational system and the principles underlying its operation are matters of national interest, because cultural and national consciousness depend on it (21).

It is obvious that the rights to education now enjoyed by many children in North America were gained by the vigilant efforts of many advocates, prepared to encounter and overcome barriers in the social, economic and political spheres. That vigilance cannot be set aside, as the process of implementation of the ideals embodied in legislation such as PL94-142 will guarantee a difficult road ahead. Educators must address the severe challenges imposed upon the training and research sectors as they identify effective implementation strategies, implement them, and monitor their ongoing quality.

5. Dominant Trends

As a field, special education has expanded quantitatively and qualitatively since 1970; modifications and new directions are inevitable and reflect the present dynamic state of special education. Some of the trends have occurred internally as a natural extension of on-going programs (e.g., "resource rooms"); others resulted from deficiencies experienced in earlier programs (e.g., services to the dependent handicapped). Still others were forced through outside pressures (e.g., legislating the right to education as a core principle of human need, as expressed legally in Public Law 94-142.)

A minimum of six components of contemporary special education service should be targeted for improvement and expansion as we close this century:

- the emergence and eventual dominance of the non-categorical service model for the handicapped individual;
- an expansion in the age ranges of students served by special education;
- a revision of concepts related to the degree of severity, and a growing acceptance of the "ecological" perspective;
- the positive expansion of technological supports to the special education enterprise;
- the expansion of service delivery by paraprofessionals;
- the continuation of adherence to the principles of normalization and integration.

While several of these considerations overlap, a brief discussion of each is required to assure clarity.

5.1 The Non-categorical Movement And Associated Pedagogical Strategies

The non-categorical movement attempts to reverse the long-practiced trend of the classification of children into specific categories, such as mental retardation, learning disability, and emotional disturbance.

Rather than perceiving each disability category as clearly differentiated from others, this emerging emphasis stresses the common characteristics shared by children across categories. A search is made for generic techniques for diagnosing and remediating the educational problems of many children.

The problem of categorizing and making differential diagnoses based on observations of young children is particularly acute, given the shortage of valid testing procedures for preschool-aged children. Handicapping conditions are not easily identified, labelled, and classified into specific deficit categories. Stress is placed upon criterion-referenced assessment tools and dynamic, task-analyzed remedial curriculums rather than norm-referenced and static procedures.

It is relevant to indicate at this point that a philosophy and supportive technology is now emerging which is a radical departure from the normative model of group instruction which has dominated special education during the past three decades. The strategies are generally categorized as "exceptional teaching"/"precision teaching"/"systematic instruction" and they are based upon two bold hypotheses: that an individual can acquire appropriate skill provided adequate time and instruction, rather than his interpersonal deficiencies; and an individual's intrapersonal learning pattern is the most legitimate entry point for instructional decision-making

Educators operating within this model see their prime objective as the maximization of individual learner growth and assume responsibility for managing and monitoring all classroom behaviors, are expert at planning/implementing/ coordinating/evaluating, and accept failure as the responsibility of the learning environment and not the internal restrictions of the child.

Accordingly the learner's needs take precedence over other considerations which normally arise in the administrative or ideological concerns of the school. No single method of instruction is considered best for all learners at all times. Pedagogic tools such as criterion-referenced-measurement and task analysis are essential in determining instructional sequences.

Such procedures are proving dramatic in altering the life adjustment of even dependent handicapped children.

5.2 Expanded Age Range for Special Education

Many school jurisdictions in North America have recently come to demonstrate an expressed willingness to deal with the

infant/toddler special needs child. Financing is now broadly provided to permit early access to educational opportunities for such children both inside and outside of the home. In some provinces and many states, diagnostic and treatment services are now available for neonates and toddlers - a testimony to the acceptance of the view that essential components of special-needs service should begin in the early years. Counselling and training for the parents of handicapped pre-schoolers has been established as a core component of such activities.

All early intervention programs share common assumptions, including the concepts that:

- children are malleable; their development and growth can be modified;
- early intervention is judicious because experiences, both positive and negative, are cumulative, and
- carefully designed and orchestrated experiences can positively alter both organic and environmental deficiencies.

A growing research base attesting to the efficacy of structured educational intervention is emerging. As evidence the author cites the Downs Syndrome Infant-Parent program at the Experimental Education Unit in Seattle (Washington, U.S.A.), the Infant Stimulation Program at the Hester Adrian Research Center in Manchester (England), and the Early Education Project of the University of Alberta in Edmonton, Alberta (Canada). These programs share two primary objectives: to facilitate the handicapped child's developmental growth and to demonstrate the corresponding positive effects upon the well-being of the family as an entity.

Further, it is now common to see a variety of social service agencies co-operating in joint ventures of service delivery to "at risk" children as a further demonstration of the dual objectives noted above. Programs which provide crisis assistance and respite care, innovative to the extent that they reinforce competencies and coping skills of parents in the home setting, are widely accepted as legitimate targets for government assistance. Governments generally appear more prepared today to provide legal and financial support whereby affected families receive financial incentives to keep their children at home in maximally supportive environments and when appropriate, to access regular and modified pre-school programs at earlier age levels than normally permitted.

Less commonly, governments are beginning to recognize that we have created needless victims of neglect in an entire generation of adolescents and young adults. They did not receive appropriate educational opportunities at an earlier age, and, as a result, are today largely socially crippled and unemployable. They require massive attention to compensate for the deprivation they suffered.

It is assumed that, as we move through the decade of the 1980's, the trend toward special education service provision of the child will be accelerated and extended from birth to the early adulthood period.

5.3 Expanded Services to Broader Ranges of Exceptionality

There is growing recognition of the need to accommodate those who show a wide variance in functional competencies within the regular school system.

Both pretraining and in-service training programs are beginning to differentiate between programs for the mildly handicapped (the great majority) and programs for the more severely handicapped (the minority). Mild handicaps are often termed "high incidence handicaps" simply because they occur more frequently while severe handicaps are known as "low incidence handicaps" because of their statistically less frequent occurrence.

Many jurisdictions in North America have developed service priority statements which favour the development of community-based services to the severely handicapped (low incidence) population primarily because these children have been the most neglected in the past.

Many psychologists, sociologists, and educators today favor an "ecological" approach to the concept of atypical/special-needs children. In this view, the interaction between the individual and his social environment is seen as the most critical factor in human development.

To adhere to this posture, one views handicaps as enhanced if not caused by negative social and environmental forces of a negative type. For example, "retardation" has a different connotation in those societies that do not value verbal intelligent adaptive behavior as a priority.

5.4 The Positive Impact of Technology

Major gains have been made this past decade in the direct application of technology to the partial resolution of the learning deficits of many individuals with special learning problems. Today the media, and particularly television, is playing a larger role in the enhancement of educational opportunities.

The simultaneous developments in the area of computer technology have been radically advanced because of development and improvement of the inexpensive microchip.

Exotic but powerful accomplishments of the microchip industry have emerged in the development of adaptive peripheral devices which allow severely motor impaired individuals to access a microcomputer and thereby the associated benefits of learning technology. Broader gains have resulted in two other areas, the application of computers to facilitate direct instruction (Computer Assisted Instruction - CAI), and to simplify and assist complex instructional processes (Computer Managed Instruction - CMI).

CAI programs attempt to guide any candidate learner through powerful pre-established educational programs; they are especially useful in enhancing a variety of specific skill areas. Effective CAI programs enable the simultaneous presentation of audio and video supplements to basic instruction (such as graphics, color display, slides, audio tapes, films, and video-tapes). CAI adaptations and "expert systems" further enable instantaneous evaluation of all learner responses while providing direct reinforcement to encourage learner effort.

CAI can be assumed as a major component of the special education enterprise in the near future.

Computer-managed instruction (CMI) permits the computer to assist in important supplementary facets of the educational enterprise. These include time consuming tasks such as record-keeping, the development of Individual Educational Plans which are so critical to special needs programs, and the translation of diagnostic data into remedial plans, to mention but a few.

It is assumed that CAI and CMI factors will continue to demonstrate program and cost effectiveness throughout North America in the next two decades. Further, it is assumed that such developments will be especially applicable to geographically isolated areas, such as the Northwest Territories, which are inaccessible to cost-effective, large population service procedures by virtue of sparse population and harsh terrain.

Podemski (1980) recently addressed the major impact which technology is expected to have on the teacher-student relationship:

. . . Full incorporation of electronic learning technology will require that teachers become more expert in diagnosing student learning style, instructional needs, monitoring student progress, and developing remediation strategies for those who are not able to learn. The student-teacher relationship will be much more personalized with contact between teachers and students being less frequent but more intense, during the periods of interaction. Master teachers will need to manage learning teams of other teachers and professionals . . . (22)

5.5 The Expansion of Community-Based Para-professionals Supports in Special Education

It is assumed that North America will continue to experience limited social service and educational financing, as these sectors of the economy compete for ever-shrinking tax dollars. In such a climate, the exclusive provision of services by the professional sector of the population cannot be supported as one guaranteeing equity and quality of service.

Accordingly, it is assumed that a corps of "paraprofessionals" working in a community-based setting (and perhaps drawn almost exclusively from that setting) will carry on much of the "hands-on" work required for the special needs population.

It is further assumed that upgraded responsibilities will result in a commensurate level of salary and status for those participating as paraprofessionals.

5.6 The Principle of Normalization as the Philosophical Base for Services

Normalization has become a captivating catchword standing for a whole new ideology of human management. According to Wolfensburger (1972), the intricate concept of "normalization" originated with the Dane, Bank-Mikkelsen, who urged society to enable and empower handicapped citizens to obtain an existence as close to normal life as is possible.

Wolfensburger provided an excellent description of the normalization principle, and further refined Scandinavian statements for the purpose of the North American audience: he called for the reversal of biases against the handicapped by the direct and indirect application of image enhancing skills appropriate to culture-specific environments (23).

The emphasis became one of allowing and encouraging individuals to lead "culturally normal" lives by modifying the environment, and obviously the educational system would become a primary target if societal expectations were to be positively altered. To repeat, the schools convey the social mores of the dominant sectors of society, and this can transmit both traditional values and radical alternatives to unjust situations. If negative reaction to handicapping conditions was culture-specific, then culture-specific remedial strategies could be shaped by the schools acting as social change agents. However, the integration strategies are most effective if they proceed after an analysis of unique national and regional facets in the social environment.

An analysis of the issue of integration carries political implications which must be fully appreciated and understood if the technical problems are to be satisfactorily solved. As Dybwad (1980) suggests:

In the field of special education hardly anything provokes heated controversy as surely as the use of the new catchwords: mainstreaming, normalization and the least restrictive environment. Ensuing conversation reveals that these terms are seen as representative of an intrusion or even an attack on well established philosophy and practices in the field of special education (24).

The reader should be reminded that forced legal mandates appear to be culturally appropriate in the context of American legal and governmental history. Powerful legal statutes such as PL94-142 are culturally normative there because they derive from the Constitutional guarantee of rights for the individual. Canadian constitutional history and tradition would make an equivalent national statute impossible to effect in Canada, given the provincial/federal power distribution and Canadian disdain of litigation processes.

Full integration encompasses the actualization of three interdependent elements - temporal integration (time spent in the regular classroom), instructional integration (sharing in the instructional environment), and social integration (acceptance by classmates). Our efforts as child advocates must be maintained

once new legislation is adopted in order to go beyond temporal and instructional integration. This requires a careful analysis of roles amongst all sectors of the educational sector: administrative, instructional, and supportive personnel involved in both regular and special education. Mittler provided a surprising interpretation of the integration issue in a challenge to the more economically and technically advanced nations:

In some ways the most advanced countries encounter the greatest difficulties in facilitating integration ... countries which do not have a special education system therefore have the opportunity to develop integrated education for all handicapped children without passing through the stage of segregated special education as experienced in the developed countries (25).

It is assumed that these principles will be globally accepted in the next two decades, and as a result the boundaries between regular and special education will dissolve.

- special needs children will be seen as individuals whose educational needs are considered as a reflection of human variance and uniqueness;
- these needs will be dealt with in a range or continuum of educational settings that reflect the wide spectrum of human individuality;
- each special needs child will be maximally served in the least restrictive setting possible and even isolated communities will be seen as appropriate normalization settings.

5.8 The Emergence of Alternate Training Models For Both Professionals and Para-Professionals

It would now appear that institutions of higher education are demonstrating readiness to stress more applied skills consistent with a competency-based model. We can expect both professionals and para-professionals to become more proficient in the delivery of "hands-on" skills to special needs children.

We are at a watershed point in service development where a major re-orientation in both the design of intervention programs and the concomitant upgrading in the training level of our personnel are required. Innovations are necessary in training efforts at

all levels. The most pressing skills required by both professional and para-professional caregivers are those which provide continuity of service through time, which maximize parental and familial roles and which employ the integration of trans-disciplinary and multi-disciplinary procedures.

5.9 The Emergence of the Parent-as-Professional

Perhaps as an outgrowth of attitudes supporting pre-school experiences as a priority, and/or perhaps because of the research testifying to the home as the most viable of all learning settings, it is possible to discern a growing recognition by various professional and legislative sectors that the parent is the primary educator of the child. As a minimum, the emerging ethic perceives the parent as a full and legitimate partner in the educational process. Research Programs (such as that sponsored by the University of Oregon Center on Human Development) report substantial gains in the developmental profiles of delayed children when parents are taught to recognize and actively facilitate the achievement of developmental milestones expected of all children. Accordingly, the child's home and neighborhood comes to be viewed as a rich educational resource center. Parents and parent substitutes can be viewed as responsible for both direct instruction and monitoring of child progress throughout the child's pre-school teaching regimen.

6. Eight Support Components for Policy Development

What implications to these trends have in the emerging ethic of special needs education? Out of the above, one can identify unique and specific service principles which could be targeted as ideals toward which we might guide our view of the future at this symposium. These include equity, comprehensiveness, flexibility, accountability, cost effectiveness, compatibility, consistency, and simplicity. Each will now be briefly discussed.

6.1 Equity/Equitability

This factor identifies the need for special education service allocations to be allotted in such a way that geographic, age, sex, soci-economic variables (and the like) do not operate to favour or disfavor any one group. The concept of equity assumes administrative advocacy - specifically, those in positions of control must be responsive to the needs, interests and concerns of all. Perhaps the area of microcomputer assistance to special needs individuals most dramatically demonstrates this point, although numerous others could be equally identified.

It has been this observer's experience that microcomputer allocation has been less than equitable in the schools, with age, sex and disability factors all operating to reinforce access by the "privileged". Who will guarantee that special needs populations have equitable access to the technological supports necessary for this maximal integration into society?

Certainly, if the consistent resolve of the U.S./OSERS Assistant Secretary, Madeline Will, is any indication, the American government appears determined to overcome these inequities as we enter a radical and new phase of advocacy:

. . . all students, including those with disabilities, have the opportunity to lead productive adult lives and to be integrated in a heterogeneous society, independent of undue reliance on others (26).

6.2. Comprehensiveness

"Comprehensive" special education programs provide a full range of educational options with appropriate support services to insure the attainment of service quality and quantity.

In the past, we have held the Cascade model of services as the most comprehensive service system. In addition, considerable service levels attained for school age children must be extended to the very young, and to those in "transition" from school to the workplace.

As Will (1986) recently noted with reference to the young adults who graduated from school programs into a service world with no productive alternative:

Because one of the major problems facing handicapped youth is the lack of continuum of services to provide an effective bridge between school and work, transition becomes a pressing issue for disabled youth, their families and education and service professionals. The absence of appropriate transition bridges limits our ability to maximize the productivity and independence of disabled individuals (27).

Will's argument further suggests the right and ability of all special needs populations to participate in gainful employment.

Symposium delegates must be prepared to advocate for those young children and young adults not normally considered the concern of public schools.

6.3 Flexibility

Special education programs are seen as flexible to the extent that changes within the organizational structure can be made in both major and minor components with a minimum of complexity. For this to occur, special educators must prove themselves to be both efficient planners (which requires a clear vision of our mandate) and adaptable innovators.

This observer's evidence suggests that the educational community seems poorly prepared to demonstrate exemplary planning or innovative strategy. Drucker (1969) wrote that

it is not possible to be effective unless one first decides what one wants to accomplish . . . It is not possible to manage, in other words, unless one first has a goal. It is not possible to design the structure of an organization unless one knows what it is supposed to be doing and how to measure whether it is doing it (28).

With reference to innovativeness, the public school sector has not provided consistent leadership status. Lindsley has identified that many powerful technologies were resisted by the educational community until the eleventh hour. These included moving pictures (1911), the typewriter (1920), overhead projector (1944), television (1962), programmed instruction (1955-68), and microcomputers (1977). Even today, the mass presence of microcomputers in schools is not a guarantee of their appropriate utilization or equitable distribution to children (29).

A study commissioned by the National Science Foundation in 1973 reported a time lag of two decades between discovery and implementation of ten major technical inventions (30).

Are members of the symposium prepared to address the major challenge issued by Podemski:

. . . If the public schools are unwilling or unable to alter their organizational and instructional delivery systems . . . They will face increased pressure from parents as well as private and commercial interests to de-control education . . . Questioning will result in continued erosion of public confidence . . . (31).

6.4 Accountability

A special education program will be seen as "promoting accountability" under those conditions in which the children are proven to have benefited in a direct and observable way from the services provided. This has long been identified as a major deficiency in the entire special education enterprise (recall Dunn's classic polemic of 1968). White and Haring recently expressed this challenge most powerfully:

Children grow. They grow and change every moment they are alive. As teachers and educators, we deal with children's lives in an very intimate and significant way, for we have been given the responsibility of facilitating and promoting that type of growth called learning. It is no small task. Most children gain from the educational process. They go on to live happy, healthy, and productive lives. For some, however, the trials are great; the opportunities, few; and the skills of their teachers, all too frequently inadequate. In a moment of critical decision for these children, we may fail to act or act inappropriately. By the time our mistakes have become painfully apparent, the momentum of our error has

grown; or worse, the child may be learning behaviors which will be counter-productive to his eventual happiness and success. Our pounds of cure accumulate, and our energies are quickly depleted for lack of that single ounce of prevention. A child is handicapped (32).

It is apparent that the special education service community must accept its share of peccadillos - both sins of omission and sins of commission - and do something about them.

One sign that this is occurring is the major paradigm shift in labelling practices - from a focus on client deficiencies to one stressing instructional services and methodologies. Meyen's definition provides a clear example of this positive transition:

Instructional options for exceptional children are those that require:

- accurate, in-depth assessment of learner strengths and weaknesses;
- intensive remediation intervention attention by specially trained teachers, support personnel, and instructional aides;
- a focus on instructional needs that require more time to remediate than routinely can be accomplished in regular instructional settings;
- precise instructional planning by teachers and support personnel;
- the use of specially designed instructional materials and/or activities;
- modifications or adaptations in the organization and/or structure of the regular curriculum.

Given that the instructional options meeting the above conditions are established, children and youth whose characteristics dictate the need for such instructional options would be considered exceptional (33).

Meyen's perspective places the full burden for effectiveness upon the special education community. Are symposium participants prepared to support and extend this major paradigm shift, and accept the consequences it entails?

6.5 Cost Effectiveness and Compatibility

All preceding factors considered, it is obvious that the special education sector is a costly one to finance, creating considerable tension with other competing sectors of the system. In the United States, federal, state and local authorities all contribute to special education coffers, while in Canada the burden is shared primarily between provincial and local authorities. In both countries, however, the rights and responsibilities assumed by any sector of government creates considerable confusion between these sectors regarding service delivery impact, and this confusion frequently leads to rancor and debate.

This is especially true for those sub-populations only recently allowed to school, the multiple and severely handicapped, who require advanced levels of service assistance. As reported by the U. S./OSERS 8th Annual Report to Congress, their service integration needs involve a complex interplay between all facets of human services:

There are certain populations of handicapped students with service needs so diverse and complex that effective services cannot be achieved unless interagency, interdisciplinary mechanisms are in place. As more interagency, interdisciplinary models for serving handicapped infants, handicapped youth, and seriously emotionally disturbed students emerge, certain factors also emerge that are considered essential for enhancing the success of these efforts:

- There must be an impetus for agencies and professionals to work together.
- Professionals from different disciplines must be trained to work cooperatively.
- There must be an incentive for professionals to work together (34).

Symposium participants are challenged to develop cost effective strategies which insure program impact upon children within the realities of a highly competitive environment. This will require extensive internal planning as well as intensive interagency communication efforts. The consequences of failing to plan and communicate are significant and potentially lethal. Should our advocacy efforts fail, we risk alienating decision makers and the

general public, and extremely limited service models characterized by traditional inequity will re-emerge.

Our challenge remains one of convincing ourselves and others that the rights of education are inalienable, and that the goals of education for special needs populations are totally compatible with the other educational sectors - preparation for life.

6.6 Simplicity

Given preceding evidence, how can one suggest "simplicity" as a primary objective for the special education enterprise? We have come to see a confusing array of social, political, and economic factors affecting the realization of ideals reflecting the equality of educational opportunity. We have come to realize dynamic tension as the norm: proponents of contradictory philosophies in the social/political/economic spheres strive to dominate. Special education practices, as they affect the child in his home and school setting, are deeply affected by larger social issues (e.g., socio-economic status, race relations), larger economic issues (e.g., equity, cost distribution), and most importantly, political issues (e.g., resolve of elected officials, the public will, the bureaucratic force).

It is apparent to this student of human behaviour that the contemporary maelstrom can be more clearly perceived if one focuses upon essential questions of ethics and commitment to human betterment. The recent Live Aid concert was supposedly a technological and logistic nightmare, and yet it was achieved: a tribute to human will and cooperation. Major historical human triumphs have consistently faced "insurmountable" odds which were gradually and ultimately overcome by human resolve.

The most effective human systems are those which avoid needless complexity and permit effective action to be instigated and completed effectively. This statement is as true for the special education enterprise.

Blaschke (1975), in addressing the shortcomings of special education technology, clearly identifies the persistent problem:

The technology is here, however, for a society so adept in developing technology, we have been inept and indeed negligent in developing the political, social, human and organizational innovations to apply that technology in such a way that its benefits can be realized.

This is particularly true in education and indeed this is our challenge (35).

This view of curriculum stresses the ultimate objectives of education as "preparation for life", something that is deprofessionalized because it recognizes the legitimate role of many "teachers" in assisting special needs pupils to attain maximal competence. It will be interesting to observe the reaction of the body politic of professional educators to this expanded humanistic posture. (Please recall the earlier quotation by Dybwad on this matter.)

A recent report released by the Indiana Division of Special Education (1986) called for a new and expanded future for children with substantial handicaps. This "second wave of the least restrictive environment" recommends no less than total integration (called "communitization") be sought after. Essentially, the report challenges us to develop an integrative view of society based upon the innate value of the individual and the enhancement of cultural diversity. The educational community maintains a critical and yet integrated status in facilitating the achievement of these goals if schools could develop and implement curriculums which:

- promote a holistic approach to lifetime needs;
- provide options and alternatives;
- build bridges between school and independent life that include the option for meaningful work;
- focus on teaching functional life skills that are needed for work and in social interactions;
- redefine what special education will be for persons with substantial handicaps;
- adapt working and living environments to accommodate persons with substantial handicaps; and
- develop collaboration between and among governmental agencies and programs at the local, state, and federal levels (36).

7. Conclusion

All acts of genius are 2% inspiration and 98% perspiration.

Charles Bliss

It is presumptuous to expect that symposium participants will achieve closure and consensus on a single model to shape the future of special education at this one session. Perhaps the only consensus possible is in the process and not product domain: a commitment to rigorous intellectual and emotional energy as we pursue nothing less than the best of all possible worlds for special needs children. More than ever that objective will require an internal liaison between the research/practitioner components within special education, and numerous external liaisons between special education/regular education/non-education service sectors of society.

As suggested earlier, there is considerable evidence that the education sector is not prepared to accept significant changes to the status quo in spite of an impressive track record in previous decades. Consider the following:

- Duttweiler (1983) indicates that in spite of the obvious advantages of utilizing technology to facilitate improved learning by all students (e.g., alternative instructional modes, differing learning strategies, improved communication) there has been no "technological explosion" in the schools because of poor correlation between phenomena arising in industry (poor software, incompatible hardware), the educational profession (poor training, inappropriate administration models), and the society at large (inability to radically revise the present governing structure and organizational pattern of ineffective schools) (37).
- Boulding (1972) identifies the education sector as immune to challenge because it has not been held accountable for the distribution of wealth and energy in setting its priority objectives. Proven methodologies in education are not widely disseminated or accepted, and educators are not supported or enabled to become productive with the new advances in technology. In a nutshell, the education sector is relatively impervious to change (38).

- Gaylord-Ross (1969) deplores the schism between practising educators and the academic research community, and citing the field of mental retardation notes that neither sector initiated or responded to the "legal and political revolution" which occurred to guarantee treatment, education and integration for mentally retarded citizens (39).
- Grossnickle and Laird (1983) in commenting on the fate of educational innovations studied by the Rand Corporation, indicated that local implementation strategies in themselves marked the success or failure of even the most powerful innovations. The Rand Study further specified that the most common procedures for implementing innovation (outside consultants, one-shot training, prepackaged management approaches) were largely ineffective. Effective outcomes occur primarily when concrete, teacher-specific, extended training occurs, and maximum ongoing participation is facilitated (40).
- Spitzer (1983) identifies the entropy concept to account for the impatience of much of our present training. Spitzer indicates that when left alone, performance will always tend to deteriorate toward mediocrity, and will only improve when it is supported by the performance system. He indicates that performance systems will fight off the threat of change and attempt to re-establish equilibrium at a satisfactory level of mediocrity. Sadly, Spitzer concludes, training alone is virtually guaranteed to have no enduring impact (41).

In order to provoke thought and stimulate action, allow the author to advance the view that public education and its special education component will not respond with adequate force or appropriate speed to avert a major crisis of confidence and corresponding loss of public support. In itself, the technological revolution driven by outside social political and economic forces will insure that a crisis will occur soon. We suspect that we are not preparing our children generally for the future, let alone our special needs population, and that only radical changes within the educational structure will reverse this phenomenon. Advances in electronic technology will continue to impact society and many contemporary special education practices and administrative structures will soon be obsolete.

Please allow closure to this presentation with reflection upon the following:

If the public schools are unwilling or unable to alter their organizational and instructional delivery systems to incorporate this technology then they will face increased pressure from parents as well as private and commercial educational interests to decontrol education and open it up to market forces. . . . Parents will begin to question the traditional role played by most teachers, and possibly will question the need for traditional school attendance itself. This questioning will result in continued erosion of public confidence in education and a decreased willingness to finance public education which duplicates other alternatives available (42).

What is suggested here is that the wise (and hopefully humane) special educator of the future will be one who promotes and implements instructional and organizational innovations that maximize the appropriate use of developments in the interpersonal and technological domains. Some of these innovations will occur in the physical environments we now call schools, while many others will occur in extended learning environments of the broader community. This move in itself will require courage; but it is necessary if special educators seek to remain as significant as others in the lives of special needs pupils who have every right to seek our help in achieving self-assurance, competence, and personal achievement.

REFERENCES

1. Gall, R. S. (1981). Human service professionals: Shortcomings and emerging challenges. Journal of Practical Approaches to Developmental Handicaps. 5(2).
2. Johnson, G. O. (1962). Special education for the mentally retarded - A paradox. Exceptional Children. 29, 62-69.
3. Dunn, L. M. (1968). Special education for the mildly retarded - Is much of it justifiable?. Exceptional Children. 35(1), 5-24.
4. Kirk, S. A. & Gallagher, J. J. (1979). Educating Exceptional Children. Boston: Houghton Mifflin.
5. Perske, R. & Smith, J. (Eds.) (1977). Beyond the Ordinary. (p 9). Parson, Kansas: Words and Pictures.
6. Redden, M. R. & Blackhurst, A. W. (1978). Mainstreaming competencies for elementary teachers. Exceptional Children. 44, 615-617.
7. Lilly, S. (1970). Classroom Sociometry. Eugene, Oregon. Northwestern Regional Special Education Instructional Materials Center.
8. Prehm, H. J. & McDonald, J. E. (1979). The yet to be served - a perspective. Exceptional Children. 45, 502-507.
9. Smith, I. L. & Greenburg, S. (1975). Teacher attitudes and labelling processes. Exceptional Children. 41, 315-324.
10. Dybwad, G. (1980). Avoiding misconceptions of mainstreaming, the least restrictive alternative, and normalization. Exceptional Children. 315-324.
11. Tucker, J. A. (1980). Ethnic proportions in classes for the learning disabled: Issues in non-biased assessment. Journal of Special Education. 14, 93-105.
12. Blatt, B. (1981).
13. Perske, R. & Smith, J. (Eds.). Ibid.
14. Csapo, M. (1980). Collect call to Ottawa: Will someone accept the charges?. In M. Csapo, L. Goguen (Eds.). Special Education Across Canada. (p. 227). Vancouver, B.C. Center for Human Development and Research.
15. Ibid, P. 276.

16. OECD. (1976). Review of national policies for education: Canada. Paris: Organization for Economic Cooperation and Development, p. 55.
17. Csap, Ibid.
18. Wilcox, B. & Sailor, W. (1980). Service delivery issues: Integrated educational systems. In Wilcox B. & York, R. (Eds.). Quality Education for the Severely Handicapped: The Federal Investment. Washington, D.C.: U.S. Department of Education, p. 282.
19. OSEP. (1986). *the Annual Report to Congress on the Implementation of PL94-142, Washington, D.C.
20. Bain, D.A. (1981). Gifted and enriched education in Canada. In Special Education Across Canada: Issues and Concerns for the '80's.
21. OECD. Ibid., p. 90
22. Podemski, R. S. (1980). Implications of electronic technology: The future is now. T.H.E. Journal, (May, 1984), p. 121.
23. Wolfensburger, W. (1972). Normalization. National Institute on Mental Retardation: Toronto.
24. Dybwad, G. (1980). Avoiding misconceptions of mainstreaming, the least restrictive environment and normalization. Exceptional Children. 47, 85.
25. Mittler, P. (1980). Responding to special education needs within the regular school system. Mental Retardation. 31(4), 10.
26. Will, M. (1986). Transition: Linking disabled youth to a productive future. OSERS News in Print, 1(1), p. 1.
27. Ibid.
28. Drucker, P. (1969). The Age of Discontinuity: Guidelines to our Changing Society. New York: Harper and Row.
29. Lindsley, O. (1986). Innovations resisted by educators. Lawrence: University of Kansas, K. S. Unpublished manuscript.
30. Selbach, R. J. & Hargen, L. (1984). Assessing and facilitating school readiness for microcomputers. Special Services in the Schools. 1(1), 91-105.
31. Podemski, R. S., Idem.

32. White, O. & Haring, N. (1980). Exceptional Teaching. 2. Columbus: C.E. Merrill.
33. Meyen, E. L. (1982). Exceptional Children in Today's Schools. Denver: Love Publishing Co.
34. Will, M. (1984). Let us pause and reflect - But not too long. Exceptional Children. 51(1), 11-16.
35. Blaschke, C. L. (1975). Technology trends in special education. T.H.E. Journal. (Feb., 1985).
36. Indiana Department of Education (1986). Unpublished manuscript.
37. Duttweiler, P. (1983). Barriers to the optimum use of technology. Educational Technology. (Nov., 1983).
38. Boulding, K. E. (1972). The schooling industry as a possibly pathological section of the American economy. Review of Educational Research. 42(1), 129.
39. Gaylord-Ross, R. J. (1979). Mental retardation research, ecological validity and the delivery of longitudinal educational programs. Journal of Special Education. 13(1), 70-80.
40. Grossnickle, D.R. & Laird, B. (1983). Microcomputers: Better pills to swallow. T.H.E. Journal. (May, 1983).
41. Spitzer, Dean. (1983). Educational Technology.
42. Podemski, R. S. (1984). Ibid.